

**REMARKS**

This Amendment and Response to Final Office Action is being submitted in response to the non-final Office Action mailed March 26, 2008. Claims 1-15 are pending in the Application.

Claims 1, 3, 5-9, 11, and 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* (U.S. Patent No. 6,246,667) in view of Lu (U.S. Patent No. 5,412,652).

Claims 2, 4, 10, and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* in view of Lu and De Girolamo *et al.* (U.S. Patent No. 7,054,558).

In response to the above rejections, Claims 1 and 8 have been amended to further clarify the subject matter which Applicants regard as the invention, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested in view of the following remarks.

**Claims 1, 3, 5-9, 11, and 13-15 - §103(a) Rejection – Ballintine *et al.*, Lu**

Claims 1, 3, 5-9, 11, and 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* (U.S. Patent No. 6,246,667) in view of Lu (U.S. Patent No. 5,412,652).

In the Final Office Action, Examiner states the limitation of “no jumpering of channels is required” is not recited in the rejected claims.<sup>1</sup> Applicants utilize channel assignment data to determine which channels to drop directly from protection, and this determination is made solely following a line switching operation based on the channel

---

<sup>1</sup> Final Office Action, Page 4, Response to Arguments

assignment data at the time of a failed span, i.e. there is no predetermination of which channels drop from protection.

Applicants have amended independent Claim 1 as follows:

1. A method of maintaining a network connection in an optical network, comprising:

obtaining channel assignment data **comprising** which channel of a plurality of channels is assigned to the network connection on each of a plurality of spans used by the network connection, wherein the optical network comprises a plurality of switching nodes and an egress switching node in one of a ring and a mesh topology, the plurality of spans comprising working and protecting fibers operatively connecting the plurality of switching nodes and carrying the plurality of channels;

propagating the channel assignment data to the plurality of switching nodes in the optical network through one of an overhead data channel, an out-of-band protocol, a service channel, and an overlay IP network;

storing, at each of the plurality of switching nodes, the channel assignment data;

monitoring the optical network for a failed span between two switching nodes of the plurality of switching nodes and notifying the optical network in response to the failed span, wherein the two switching nodes perform a line switching operation in response to the notification in order to switch the network connection to the protecting fiber;

determining at the egress node which channel the network connection utilized on the failed span based on the channel assignment data and the notification of the failed span, wherein the channel assignment data and the notification of the failed span are utilized to efficiently configure which channel to drop responsive to the failed span, **and wherein the channel is determined by the determining step responsive to the stored channel assignment data when the failed span occurs without a predetermination of the channel;** and

dropping the channel selected by said determining step from the protecting fiber at the egress switching node, wherein the determining and dropping steps are performed following the line switching operation.

A similar amendment has been included in independent Claim 8.

Ballintine *et al.* use a “jumper flag” in combination with existing SONET/SDH BLSR protocols for each active tributary affected by the path degradation.<sup>2</sup> As described

---

<sup>2</sup> U.S. Patent No. 6,246,667, Col. 1, lines 46-48.

by Ballintine *et al.* in FIG. 10, Ballintine *et al.* first perform the “jumpering” on the affected channels, and then the conventional BLSR line switching.<sup>3</sup> Applicants’ present invention first performs a line switch and then, responsive to the channel assignment data, drops the channel from the protection fiber at the egress node, i.e. Applicants do not jumper connections, but rather drop directly from protect after a line switch. Ballintine *et al.* perform jumpering of channels at both ingress and egress nodes, while applicants only drop at the egress node the affected channels from the protecting fiber directly instead of receiving it off the working fiber. The channel assignment data and the notification of the failed span are utilized to efficiently configure which channel to drop responsive to the failed span. No jumpering of channels is required.

Therefore, Applicants respectfully submit that the rejection of Claims 1, 3, 5-9, 11, and 13-15 under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* in view of Lu has now been overcome and respectfully request that this rejection be withdrawn, these claims being otherwise allowable.

**Claims 2, 4, 10, and 12 - §103(a) Rejection – Ballintine *et al.*, Lu, De Girolamo *et al.***

Claims 2, 4, 10, and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* in view of Lu and De Girolamo *et al.* (U.S. Patent No. 7,054,558). The amendments and arguments presented above apply with equal force here. Therefore, Applicants respectfully submit that the rejection of Claims 2, 4, 10, and 12 under 35 U.S.C. §103(a) as being unpatentable over Ballintine *et al.* in view of Lu and De Girolamo *et al.* has now been overcome and respectfully request that this rejection be withdrawn, these claims being otherwise allowable.

---

<sup>3</sup> U.S. Patent No. 6,246,667, Col. 1, lines 60-64

**CONCLUSION**

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

Date: April 17, 2008

/Christopher L. Bernard/  
Christopher L. Bernard  
Registration No.: 48,234

Lawrence A. Baratta Jr.  
Registration No.: 59,553

Attorneys for Applicants

**Clements | Bernard | Miller**  
1901 Roxborough Road, Suite 300  
Charlotte, North Carolina 28211 USA  
Telephone: 704.366.6642  
Facsimile: 704.366.9744  
[cbernard@worldpatents.com](mailto:cbernard@worldpatents.com)